IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Although no claim amendments are made at this time, the full text of the claims is presented for the convenience of the Examiner.

1. (ORIGINAL) A beam scanning apparatus, comprising a collimating lens in which a beam emitted from a light source is transformed into at least one of a convergent beam and a parallel beam with respect to an optical axis and outputted towards a slit, the collimating lens being one sheet of a spherical surface lens satisfying the relationship:

$$-0.3 < \frac{R2}{R1} < -0.1$$

$$0.05 < \frac{d}{f} < 0.5$$

in which, *R1* denotes a curvature radius of a first surface of the collimating lens opposing the light source, *R2* denotes a curvature radius of a second surface of the collimating lens opposing the slit, *d* denotes a center thickness of the collimating lens, and *f* denotes a focal length from the collimating lens to the light source.

2. (ORIGINAL) The beam scanning apparatus of claim 1, wherein the collimating lens has a positive refractive power.

3. (ORIGINAL) The beam scanning apparatus of claim 1, wherein the collimating lens is glass.

4. (ORIGINAL) The beam scanning apparatus of claim 1, wherein the slit is formed in an elliptical shape having a larger diameter in a main scanning direction than in a sub-scanning direction.

5. (PREVIOUSLY PRESENTED) A beam scanning apparatus comprising:

a collimating lens in which a beam emitted from a light source is transformed into at least one of a convergent beam and a parallel beam with respect to an optical axis and outputted towards a slit, the collimating lens being one sheet of a spherical surface lens which comprises:

a first surface, opposing the light source, having a first curvature radius;

a second surface, opposing the slit, having a second curvature radius; and

a center thickness, wherein a length of the second curvature radius is between –0.3 and –0.1 times a length of the first curvature radius, and a length of the center thickness is between 0.05 and 0.5 times a focal length from the collimating lens to the light source.

6. (ORIGINAL) The beam scanning apparatus according to claim 5, wherein the collimating lens further comprises glass to prevent printing quality deterioration due to temperature change.

7. (ORIGINAL) The beam scanning apparatus according to claim 5, wherein the collimating lens has a positive refractive power.

8. (ORIGINAL) The beam scanning apparatus according to claim 5, wherein the slit is elliptical and has a larger diameter in a main scanning direction than in a sub-scanning direction.

9. (PREVIOUSLY PRESENTED) A beam scanning apparatus comprising:

a collimating lens in which a beam emitted from a light source is transformed into at least one of a convergent beam and a parallel beam with respect to an optical axis and outputted towards a slit, the collimating lens being one sheet of a spherical surface lens which comprises:

a first surface, opposing a light source, having a first curvature radius;

a second surface, opposing a slit, having a second curvature radius;

a center thickness of the collimating lens; and

a focal length from the collimating lens to the light source, wherein the collimating lens is glass.

10. (ORIGINAL) The beam scanning apparatus of claim 9, wherein a length of the second curvature radius is between –0.3 and –0.1 times a length of the first curvature radius, and the length of the center thickness is between .05 and .5 times the focal length.

11. (ORIGINAL) The beam scanning apparatus of claim 9, wherein the collimating lens has a positive refractive power.

12. (ORIGINAL) The beam scanning apparatus of claim 9, wherein the slit is elliptical, the ellipse having a larger diameter in a main scanning direction than in a sub-scanning direction.

13. (PREVIOUSLY PRESENTED) A beam scanning apparatus for use with a laser printer with resolution ranging from 300 dots per inch to 600 dots per inch, comprising:

a laser diode to emit light;

a collimating lens, being one sheet of a spherical surface lens, including a first surface, opposing a light source and having a first curvature radius, a second surface, opposing a slit that has a larger diameter in a scanning direction than in a sub-scanning direction and having a second curvature radius, a center thickness, and a focal length from the collimating lens to the light source, wherein a length of the second curvature radius is between –0.3 and –0.1 times a length of the first curvature radius, and a length of the center thickness is between 0.05 and 0.5 times the focal length;

a cylinder lens in which light beams, passing therethrough, are transformed into linear shapes;

a rotating polygon mirror to move the horizontal linear beams from the cylinder lens at a constant linear velocity;

an f-theta lens having a constant refractivity with respect to the optical axis; and

a photosensitive drum on which image data is formed.

14. (ORIGINAL) The beam scanning apparatus of claim 13, wherein the collimating lens is glass.

15. (ORIGINAL) The beam scanning apparatus of claim 13, wherein the collimating lens has a positive refractive power.

16. (ORIGINAL) The beam scanning apparatus of claim 13, wherein the slit is elliptical and has a larger diameter in a main scanning direction than in a sub-scanning direction.

17. (PREVIOUSLY PRESENTED) A beam scanning apparatus for use with a laser printer with resolution ranging from 300 dots per inch to 600 dots per inch, comprising:

a laser diode to emit light;

a collimating lens, being one sheet of a spherical surface lens, including a first surface,

opposing a light source and having a first curvature radius, a second surface, opposing a slit that has a larger diameter in a scanning direction than in a sub-scanning direction and having a second curvature radius, a center thickness of the collimating lens, and a focal length from the collimating lens to the light source, wherein the collimating lens is glass;

a cylinder lens in which light beams, passing therethrough, are transformed into linear shapes;

a rotating polygon mirror to move the horizontal linear beams from the cylinder lens at a constant linear velocity;

an f-theta lens having a constant refractivity with respect to the optical axis; and

a photosensitive drum on which image data is formed.

18. (ORIGINAL) The beam scanning apparatus of claim 17, wherein a length of the second curvature radius is between –0.3 and –0.1 times a length of the first curvature radius, and a length of the center thickness is between 0.05 and 0.5 times the focal length.

19. (ORIGINAL) The beam scanning apparatus of claim 17, wherein the collimating lens has a positive refractive power.

20. (ORIGINAL) The beam scanning apparatus of claim 17, wherein the slit is elliptical, the ellipse having a larger diameter in a main scanning direction than in a sub-scanning direction.